

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017568**Date Inspected:** 15-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

**BAY#10****ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10**

This QA Inspector observed the following work in progress

**Shielded Metal Arc Welding (SMAW):**

Repair welding of weld joint # 44 located on Bike Path, top cover plate to side plate BK004A6 – 025. Welder is identified as 052493. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 4G (4F) – Repair.

**Heat Straightening:**

Heat Straightening being performed on Bike Path identified as BK004A - 31 by oxy-acetylene flame method to remove the distortion that occurred after welding. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei present at the location. This activity appeared to comply with the Heat Straightening Report # HSR1 (B) – 9343.

This QA Inspector observed the following work not in compliance:

**Description of Incident:**

During the Caltrans Quality Assurance (QA) in-process observations of Façade Assembly, this QA Inspector

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discovered the following issues:

- A single pass fillet weld size on façade measured to be less than the required size as per the approved shop drawing.
- Shop drawing # SD1-SFSA3-37 specifies 6 mm fillet weld size.
- In a total 1335 mm length of the weld, this QA inspector observed that 40 mm length of the weld size ranges from 3 to 3.5 mm.
- This is due to the lack of room/space to do the required size of welding.
- This weld is a fillet weld, joining the facade top plate to the stiffener plate (SF3-79).
- The component and weld designations are identified as SD1-SFSA3-37; Weld#09.

Applicable reference:

Approved Drawings: “SD1-SFSA3-37”

AWD 1.5 2002, Section 6.26.1.7: “ A fillet weld in any single continuous weld may underrun the nominal fillet weld size specified by 2mm[1/16in.] without correction, provided that the undersize portion of the weld does not exceed 10 percent of the length of the weld. On the web-to-flange welds on girders, underrun shall be prohibited at the ends for a length equal to twice the width of the flange”.

This QA notified ZPMC QC identified as Mr. Jiang Xiao Bo and ABF inspector identified as Mr. Lu Yi Jun of the above issue and that an incident report will be generated.

For further information see below pictures:-

BAY#11

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 25 located on Bike Path BK004A3 – 023. Welder is identified as 040759. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 14 located on Bike Path BK004A4 – 023. Welder is identified as 040704. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 52 located on Bike Path BK004A3 – 023. Welder is identified as 049220. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 15 located on Bike Path BK004A4 – 023. Welder is identified as 042218. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

BAY#12

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#12

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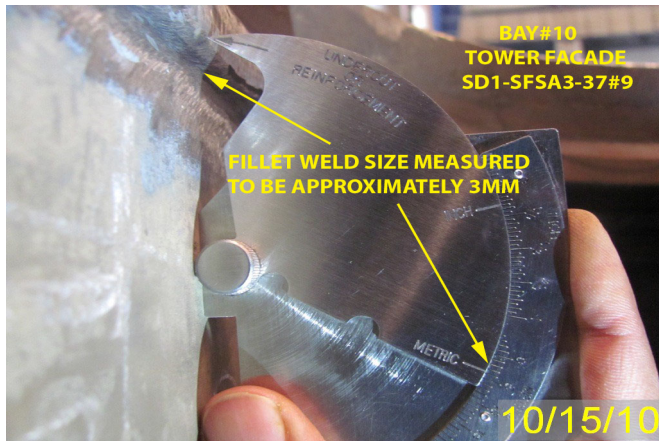
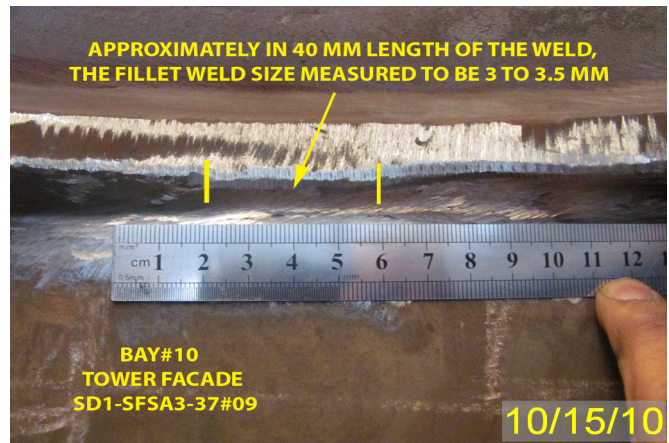
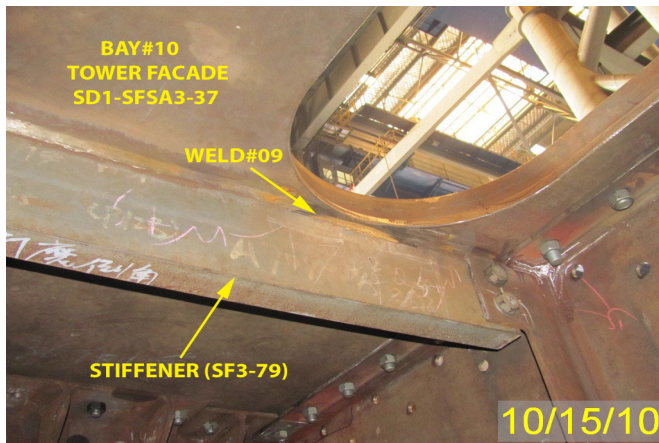
This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 05 located on U-rib splice plate SA3114C – 016. Welder is identified as 203805. ZPMC Quality Control (QC) Inspector is identified as Zhao Jian Hang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4b – F.

Weld joint # 05 located on U-rib splice plate SA3114C – 035. Welder is identified as 059418. ZPMC Quality Control (QC) Inspector is identified as Zhao Jian Hang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

No Relevant Conversations.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kumar,Sandeep	Quality Assurance Inspector
<b>Reviewed By:</b>	Clifford,William	QA Reviewer

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